

SMU 56/57 Demonstration Project Air Monitoring
Table of Contents

1)	Executive Summary	1
	A) Background and Purpose	1
	B) Project Summary	2
	C) Author's Notes on Using This Report	4
2)	Project Overview	7
	A) Design Considerations	7
	B) Sampling and Analytical Protocols	8
	C) Sample Handling	9
	D) Data Quality Objectives	10
	E) Sampling Locations	11
	F) Site Descriptions	11
3)	Data Quality Review	19
	A) Independent Data Review	19
	B) Sampler Calibrations and Audits	20
	C) Completeness and Representativeness	21
	D) Quality Control Sample Results	21
	1) Blanks	21
	2) Duplicates	22
	3) Back Half Samples	23
	4) Spiked Samples	24
	E) Meteorological Data	25
4)	Discussion of Results	27
	A) Results Overview	27
	B) Treatment of LOD and LOQ Samples	27
	C) Main Project, 24 Hour Sampling	29
	D) Main Project, 72 Hour Sampling	33
	E) Landfill Results	36
	F) WUATM and Other Distant Sites	37
5)	Data Evaluation	41
	A) Historic WUATM Monitoring Data	41
	B) Main Study Extent of Observed Impact	43
	C) Difference in Background Levels	48
	D) Risk Assessment	50
6)	Emission Calculations	53
	A) Emission Calculations	54
	B) Comparison with Emission Modeling	56
7)	Appendices	
	A) Sample Collection Log	
	B) Analytical Results	
	C) Individual Sampling Events	
	D) Completeness	

SMU 56/57 Demonstration Project Air Monitoring

Table of Contents

List of Figures

Figure 1: Main Study Site Locations	16
Figure 2: Distant and Landfill Sites	17
Figure 3: Green Bay Yearly Trend	41
Figure 4: 24 Hour Regressions	47
Figure 5: 72 Hour Regressions	47

Appendix C: Individual Sampling Events

List of Tables

Table O-1: Sampler Locations	15
Table Q-1: Sampler Flow Audit Results	20
Table Q-2: Duplicate Sample Results	22
Table Q-3: Detected Back Half Sample Analysis	24
Table Q-4: Analytical Recovery	25
Table Q-5: Spike Duplicate Precision	25
Table R-1: Main Study 24 Hour Sample Results by Site and Run Day	30
Table R-2: Main Study 24 Hour Sample Results by Run	31
Table R-3: Main Study 24 Hour Sample Results by Run, Remediation Property	31
Table R-4: Main Study 24 Hour Sample Results by Run, Non-Remediation Property	31
Table R-5: 24 Hour Sample Site Averages	32
Table R-6: Main Study 72 Hour Sample Results by Site and Run Day	34
Table R-7: Main Study 72 Hour Sample Results by Run	34
Table R-8: Main Study 72 Hour Sample Results by Run, Remediation Property	35
Table R-9: Main Study 72 Hour Sample Results by Run, Non-Remediation Property	35
Table R-10: 72 Hour Sample Site Averages	36
Table R-11: All Sample Site Averages	36
Table R-12: Landfill Monitoring, 24 Hour Samples	37
Table R-13: Landfill Monitoring, 72 Hour Samples	37
Table R-14: Landfill Monitoring, Site Averages	37
Table R-15: Distant and WUATM Sample Results	38
Table R-16: Distant Site Averages	39
Table R-17: WUATM Site Pre- and During Dredging Averages	39
Table R-18: WUATM Site Data Corresponding to Main Project	39
Table EV-1: Yearly Green Bay WUATM PCBs	41
Table EV-2: Seasonal Green Bay WUATM PCBs	42
Table EV-3: Site Averages and Distances	44
Table EV-4: Regression Statistics	45
Table EV-5: Background Site Differences	48
Table EV-6: Background Regressions	48
Table EV-7: Pre-Dredge Samples	49
Table EV-8: Increases in Risk During 24 Hour Sampling	51
Table EV-9: Increases in Risk During 72 Hour Sampling	51
Table EC-1: Emission Rate Calculations from Ambient Results	55
Table EC-2: Average Calculated Emission Rates	56
Tables EC-3 – EC-5: Modeled Concentrations	58,59